

John
La Forge

June 4, 2014

The Natural Resources, Environment and Great Lakes Committee
Senate of Michigan
To the Committee Clerk CJ Galdes

Re Senate Bill 948 - *Support*

Dear Committee Members:

I am a co-director of Nukewatch, a non-profit environmental watchdog group in Wisconsin where I have worked for 22 years. I edit the organization's newsletter, "Nukewatch Quarterly," where we present a critical analysis of the hazards of ionizing radiation in medicine, nuclear power, nuclear weapons and radioactive waste — its transport, reprocessing and disposal.

I am deeply concerned about the preservation and improvement of water quality in the Great Lakes and the St. Lawrence Seaway, waters shared by the people of the United States and Canada. I may have a more intimate relationship with the Great Lakes, and a more personal bias in favor of them, than many of the people in this room, because I spent the first 18 years of my life living on the shore of Lake Superior, my parents lived there for 55 years, and as a young man I paddled in a canoe expedition from Montreal, Ont. to Duluth, Minn., which traversed the Ottawa and Mattawa Rivers, Lake Nipissing, the north coast of Georgian Bay and the North Channel of Lake Huron and the 600-mile South Shore of Lake Superior.

It is commonly said that 40 million people rely on Great Lakes waters, including 25 million US residents, for drinking, cooking, bathing, transportation, shipping and recreation. Because it is our responsibility as stewards of this enormous gift of nature to protect it from contamination, and to clean up and eliminate the sources of pollution that already darken its waters, I appreciate the Michigan Senate's work in the service of this noble goal.

Unfortunately, the Great Lakes and the St. Lawrence Seaway have for generations been used as a sewer by point source industries, by major cities, and by the shipping industry.

For example, the US Army Corps of Engineers, between 1957 and 1962, dumped more than 1,500 barrels of toxic and radioactive military waste into the western end of Lake Superior. Some barrels were dumped within one mile of the drinking water intakes for Duluth, Minn. and Superior, Wisc.¹ Fifty years later, only 30 of these barrels have ever been recovered, and examination of them has proved that the government and industry polluters misinformed the public about their contents. What authorities said was harmless metal shavings turned out to be 12 heavy metals, PCBs and gamma radiation emitters. (Our organization has published a 12-page report on this ongoing scandal. www.nukewatchinfo.org)

It is disconcerting in the extreme that Ontario's Joint Review Panel (JRP) is considering adding to this history of the deliberate pollution of the Great Lakes. It is especially troubling in view of the fact that high rates of cancer and other debilitating disease among the people drinking water from the lakes have already been documented by the US Centers for Disease Control in its December 2008 report "Great Lakes Areas of Concern."²

I say Canada's JRP is studying the "deliberate" pollution of the lakes because it is clear here that Ontario Power Generation (OPG) intends to poison Lake Huron with its radioactive waste. It is not just that OPG's proposed waste

¹ Nukewatch, "Drinking Water at Risk: Toxic Military Wastes Haunt Lake Superior," <www.nukewatchinfo.org> January 2013

² CDC, "Great Lakes Areas of Concern Reports," Dec. 2008, <www.atsdr.cdc.gov/grtlakes/aocreport/2008.html>; "Experts say CDC report on lake pollution and health problems misleading," *Duluth News-Tribune*, Sept. 6, 2008; "Group says Feds are hiding data," *Duluth News-Tribune*, Feb. 8, 2008

packages are being planned and prepared to disgorge their radioactivity to the deep dump — the Canadian Nuclear Safety Commission (CNSC) says “... the repository becomes the container.”³

In an informational pamphlet made public in December 2008 about its plans for the Deep Geologic Repository (DGR), the company itself posed the question: “Will the drinking water of millions of residents in the Great Lakes Basin be contaminated?” OPG’s short answer was, “Yes. It will.” OPG’s handout puts it this way: “The dose is predicted to be negligible initially and will continue to decay over time.”⁴

OPG’s unabashed confession that the water will be contaminated by the proposed DGR begs several questions that the Michigan Senate should ask:

- 1) By saying the radiation “dose is predicted to be negligible,” does OPG mean that a predictable dose of ionizing radiation is to be added to the Great Lakes Basin?
- 2) Does OPG mean that it intends to give a predictable radiation dose to the population that drinks water which has been contaminated by radiation leaking from the DGR? And
- 3) In either case: What is the scientific or engineering design basis for the assertion by OPG that the dose will be “negligible”?

OPG’s handout is becomes even more provocative.

In answer to its question, Will DGR contaminate the water?, OPG says” “...even if the entire waste volume were to be dissolved into Lake Huron, the corresponding drinking water dose would be a factor of 100 below the regulatory criteria initially, and decreasing with time.”⁵

If this flabbergasting assertion is actually the position of the OPG, it ought to prompt the public generally, and this oversight panel in particular, to demand to know: Why would the government dig and operate a one-billion-dollar DGR when it is safe to throw all the radioactive waste into the water?

OPG’s bold intention to radioactively contaminate Lake Huron betrays a staggering callousness toward living things which would be forced to endure the long-term health effects caused by exposure to its ionizing radiation. As the late professor emeritus John Gofman has made clear, “The evidence of radiation producing cancer is beyond doubt. It is not a question any more. Radiation produces cancer and the evidence is good all the way down to the lowest doses.”

It was made clear for the record Sept. 23, 2013, that there is no law precluding the placement of highly radioactive waste fuel in the DGR being considered here, and that an application for the use of the proposed DGR for waste fuel would be taken into consideration in compliance with law.

In view of the fact that the wastes that may conceivably be placed in the proposed DGR — “intermediate” wastes, “decommissioning” wastes, *and* high-level waste fuel rods — include extremely long-lived alpha-emitting isotopes like plutonium, the OPG’s assurance that doses “will continue to decay over time” is of absolutely no value in scientific terms. Plutonium for example, the most toxic substance on Earth, takes a quarter-of-a-million years to “decay.” Some of plutonium’s sister alpha emitters will be dangerously radioactive, and should be kept out of the environment, for millions of years. For example americium, which itself persists in the environment for 1,410 years, decays to something even more dangerous: It decays to plutonium.

³ Peter Elder, CNSC, JRP public hearing, Kincardine, Ontario, Sept. 23, 2013

⁴ Ontario Power Generation public hearing handout, “WELCOME: Safe, Responsible Management of Nuclear Waste: Keeping You Informed About the Deep Geologic Repository Project. Natural Barriers to Providing Long Term Management to Safely Isolate Low & Intermediate Level Waste,” www.opg.com/dgr; December 2008

⁵ Ibid

As confirmed Sept. 23, 2013 by the CNSC's Mr. Elder, "In the long term, the repository becomes the container." While this admission is commendable in its breathtaking honesty, it is not environmentally reassuring in any respect. Since OPG anticipates that all its waste packages will unleash their contents into the DGR's caves, the radioactivity inside the DGR will inevitably reach the environment and human populations by way of water flowing underground through the wastes, and eventually coming to the surface, and/or into Lake Huron, through springs or wells. Thus, OPG's admission in 2008 that the Great Lakes Basin will be contaminated.

OPG's plans for its hazardous radioactive wastes make inevitable 1) the radioactive poisoning of common property and 2) the avoidable endangerment of the 40 million people dependent on the Great Lakes. I say "avoidable endangerment" because there is absolutely no reason for this rush to build and operate a DGR. Your process appears rushed because in the case of the Yucca mountain proposal for deep burial of radioactive waste in the US, it took more than 28 years and \$7 to \$9 billion to discover that the site was unsuitable. And Yucca Mt. is a desert environment not one mile from an enormous inland sea.

The pressure to hurry the process is arguably just a measure of the nuclear industry's wish to rid itself of increasingly high waste storage expenses and accident liability.

Since waste production has become the principle function of the nuclear power industry — electricity merely its fleeting byproduct — the simplest way to free ourselves of industry's pressure to rush ahead with ill-conceived "waste hiding" project like this, is to phase out the production of radioactive waste by ending the operation of nuclear power reactors in Canada. In the words of Dr. Arjun Makhijani, the president of the Institute for Energy and Environmental Research (who has written a book-length analysis of this question), "Nuclear is unnecessary and all of its risks can be avoided by using renewables, conservation and efficiency."⁶

There is no industrial need and no environmental rationale for the underground burial of radioactive waste, much less a rush to do so. Indeed, there are far better, safer, and more responsible, alternatives that must be chosen — for example, aboveground, monitored, hardened on-site storage.

For all of these reasons, and on behalf of Nukewatch's members in the US and Canada, I urge you reject the DGR proposal and support SB 948.

Sincerely,

John M. LaForge
Co-director, Nukewatch

⁶ Arjun Makhijani, *Carbon Free and Nuclear Free*, 2008, <http://ieer.org/carbonfree/>